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HHP 484.01: Preventive and Rehabilitative Exercise Program - Laboratory

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HHP 484 Preventive and Rehabilitative Exercise Program - Lab

Department of Health and Human Performance
The University of Montana

Dr. Steven Gaskill
Fall 2001

Human Performance Laboratory
McGill Hall - Room 115

Notes

The University of Montana
Department of Health and Human Performance

HHP (UG) 484 Laboratory for Preventive and Rehabilitative Exercise Programs

Course Description:

This lab course is designed to compliment the lecture course (483) and will offer you a hands-on understanding of the procedures involved in exercise prescription and testing. Although some topics covered in the laboratory are not discussed in class, the goal of the lab experience is to better prepare you for certification by the American College of Sports Medicine. By integrating this lab (484) with the lecture course (483), you will gain a level of competence that will better prepare you for applied and clinical exercise testing and prescription.

Course Objectives:

To acquire,

1. a detailed understanding of the learning objectives necessary for certification with the American College of Sports Medicine.
2. an understanding of estimating the metabolic cost of various activities as a result of exercise testing and for exercise prescription.
3. the necessary knowledge for proper electrode placement and the' procedures for submaximal and maximal graded exercise testing .
4. a working knowledge of EKG interpretation during both rest, exercise, and recovery.
5. an ability to administer graded exercise tests to apparently healthy subjects from informed consent (start) to interpretation (finish).

Instructional Format:

One 110-min. lecture/lab each week consisting of demonstrations and laboratory experiences. Lab reports are required to be completed and the specified handouts or prepared by computer. Handwritten reports (including graphs) will not be accepted!

Grading:

Letter grades are calculated from the total points...
Labs (11 x 25 points each) = 275
Practical exam (graduate students only) = 50
Total points = 275 undergraduates; 325 graduate students

A	90 -100 %
B	80 - 90 %
C	70 - 80 %
D	60 - 70 %
F	below 60 %

TEXT: ACSM GUIDELINES for EXERCISE TESTING AND PRESCRIPTION; 5th Edition, Williams and Williams

Because each University has a unique lab and in some cases, limited equipment, there is not an appropriate text available for this course. The content has been structured based on the available equipment in our lab. This manual/faculty packet has been prepared which briefly outlines each lab report and provides data sheets. The manual/faculty packet is available for purchase at the University bookstore.

Course Evaluation:

Students will be advised to critically evaluate the course content and instructor to ensure future improvements. Official University student evaluation forms will be provided during the last week of instruction.

COURSE OUTLINE

Week	Lab #	Page	Topic
1	1	7	Syllabus introduction, Treadmill, cycle ergometer calibration, introduction to ACSM metabolic equations
2	2	12	Peripheral pulse recognition, HR monitoring - rest, exercise, recovery
3	3	15	Resting, exercise, recovery BP - effects of body position
4	4	18	EKG electrode placement - resting rate, rhythm, axis determination
5	5	25	ACSM metabolic equations - treadmill/cycle - comparison to metabolic system
6	5 cont.		ACSM metabolic equation - step/ arm - comparison to metabolic system
7	6	33	Treadmill protocol comparisons (HR, BP, V02)
8	7	38	Cycle ergometer protocols - YMCA protocol
9	7 cont.		Cycle ergometer protocols - ACSM protocol
10	8	43	Effects of valsalva, hyperventilation, active and passive recovery on HR, BP, EKG
11	9	51	FEV, FEV1.0 pre vs. post exercise - detection of exercise induced asthma
12	10	55	Skinfold, waist-hip, body breadths, circumference measures
13	11	67	Ventilatory Threshold
Graduate Lab		72	Site Visitations